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H04B 1/69

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## (54) Spread spectrum radio receiver synchronisation

(57) A code acquisition circuit, for acquiring code synchronisation between an n-chip spreading code of a received spread spectrum radio signal and an n-chip local reference code generated by a code generator within a receiver, has a variable delay 1 which operates to introduce a delay shift into the said received radio signal, a correlator 3,5,7 which operates to correlate n-chips of the local reference code with n-samples of the received signal communicated thereto, and generates a correlation signal representative of a result of the correlation, and an code acquisition controller which operates in combination with the correlation signal to maintain the delay shift for at least one correlation and thereafter to change the delay shift, wherein the delay shift is a fraction of one chip period. Delay 1 is controlled by random number generator 14.

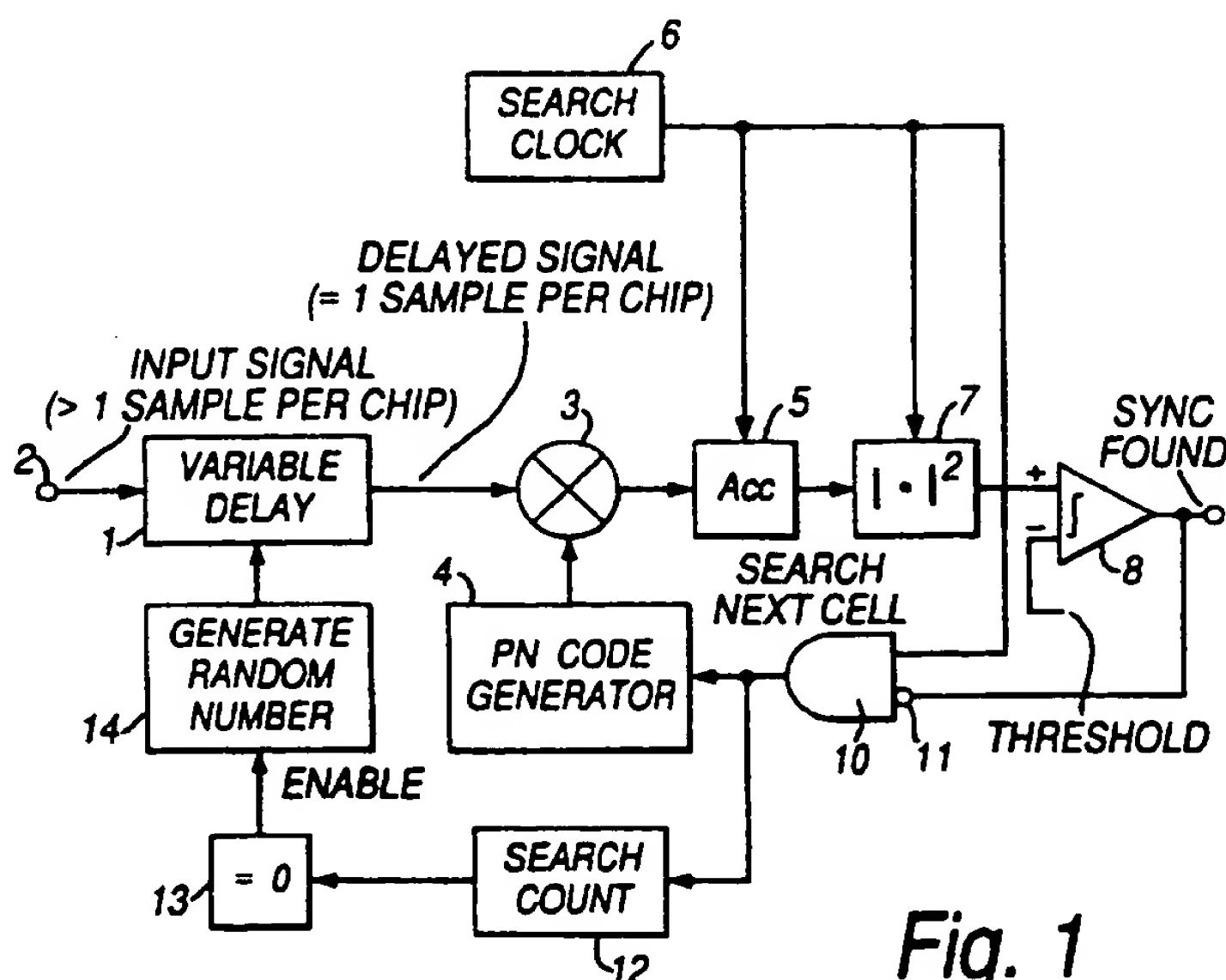
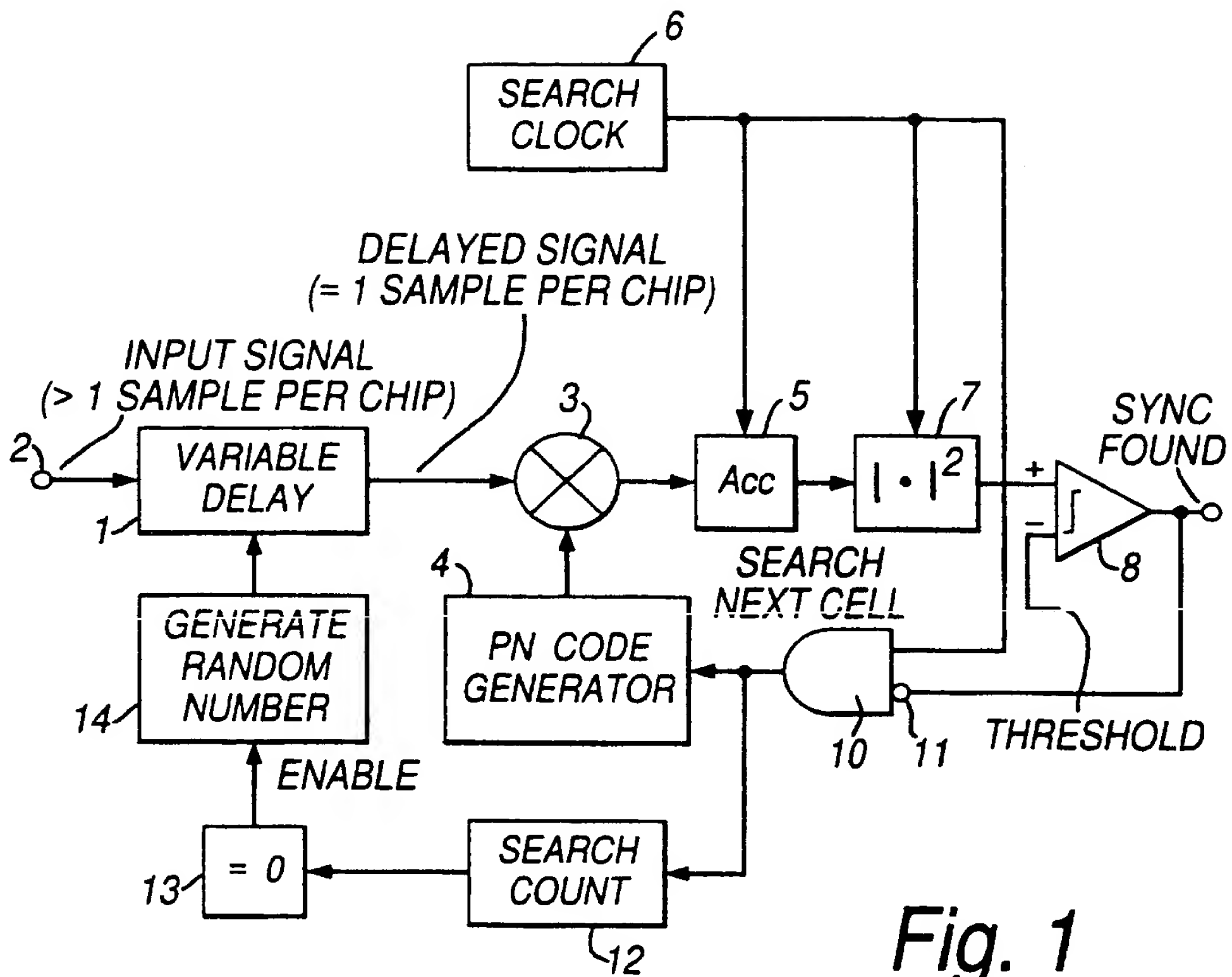
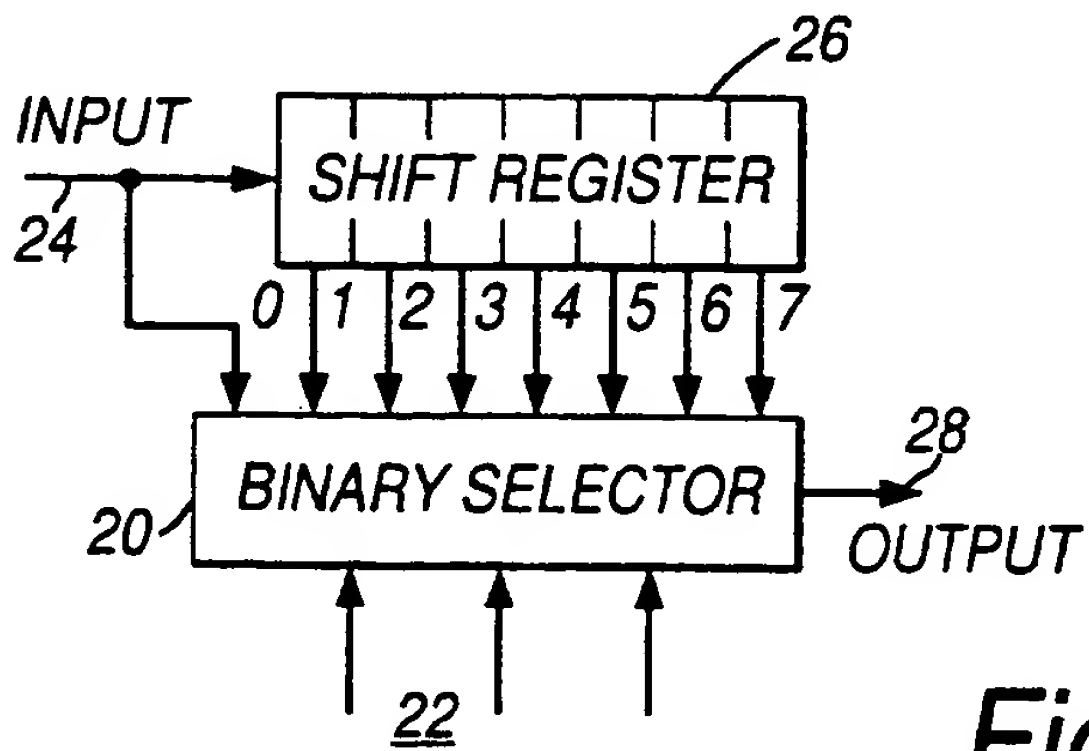


Fig. 1

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*Fig. 1*



**Fig. 2**

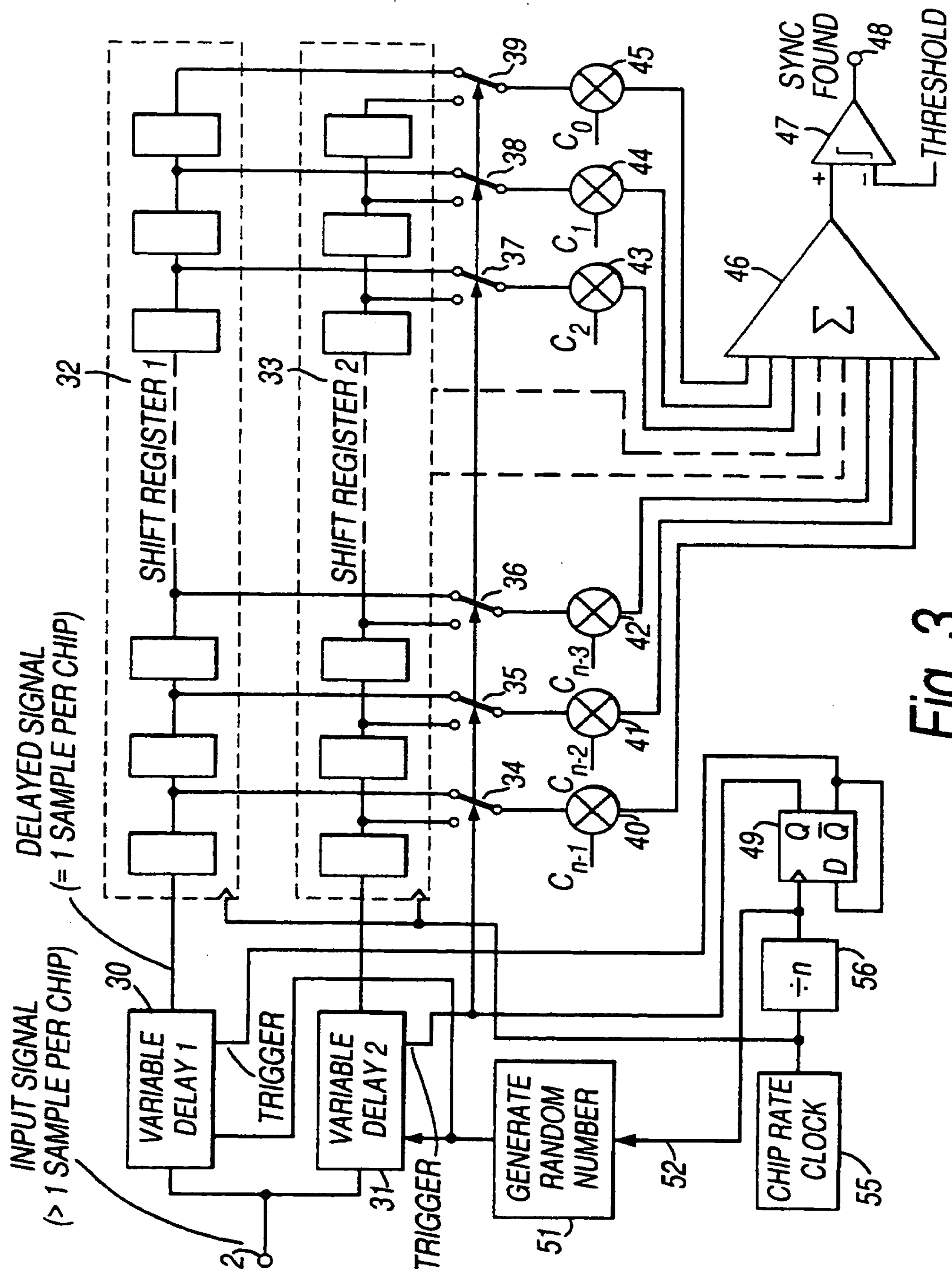


Fig. 3

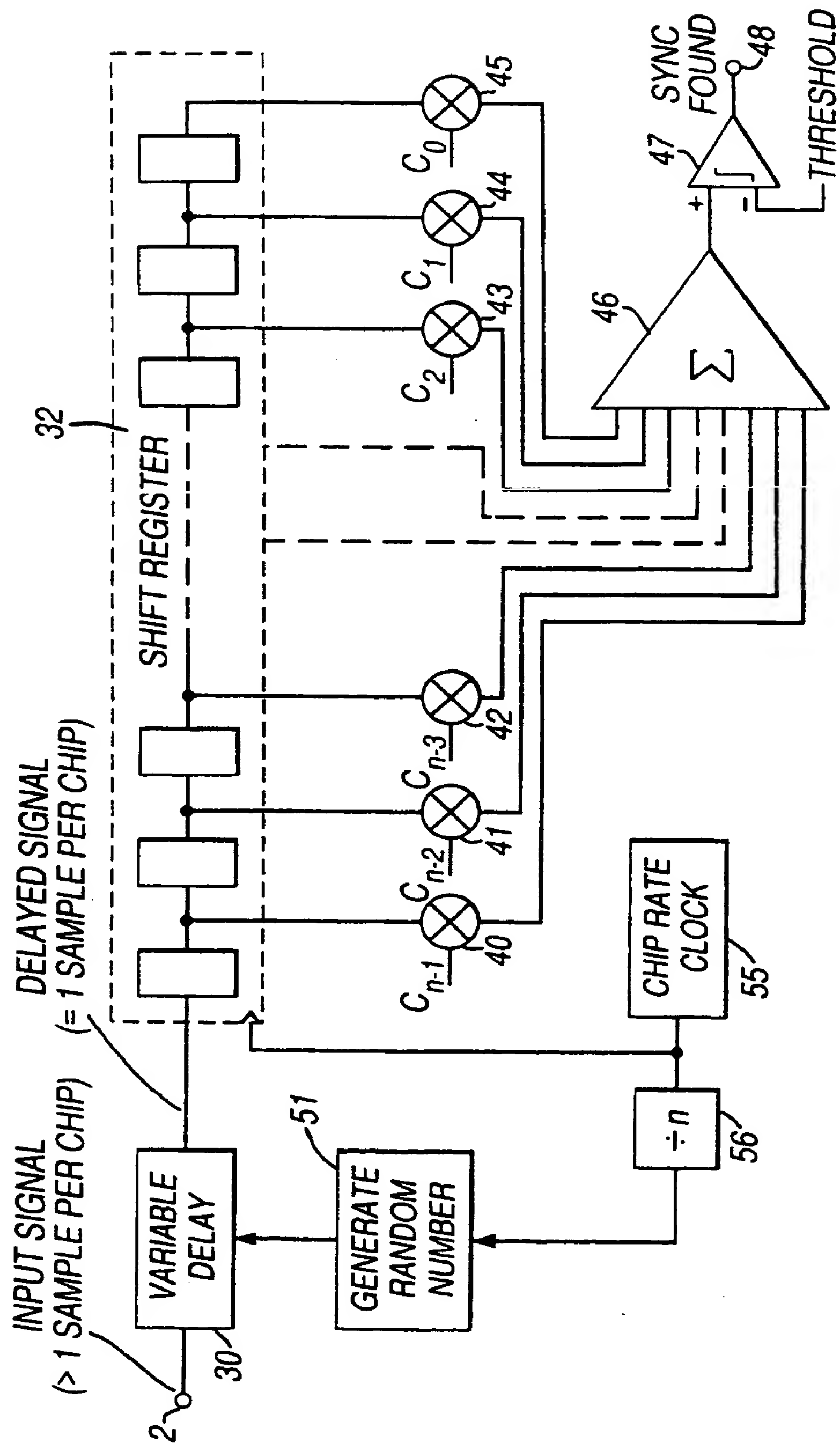


Fig. 4

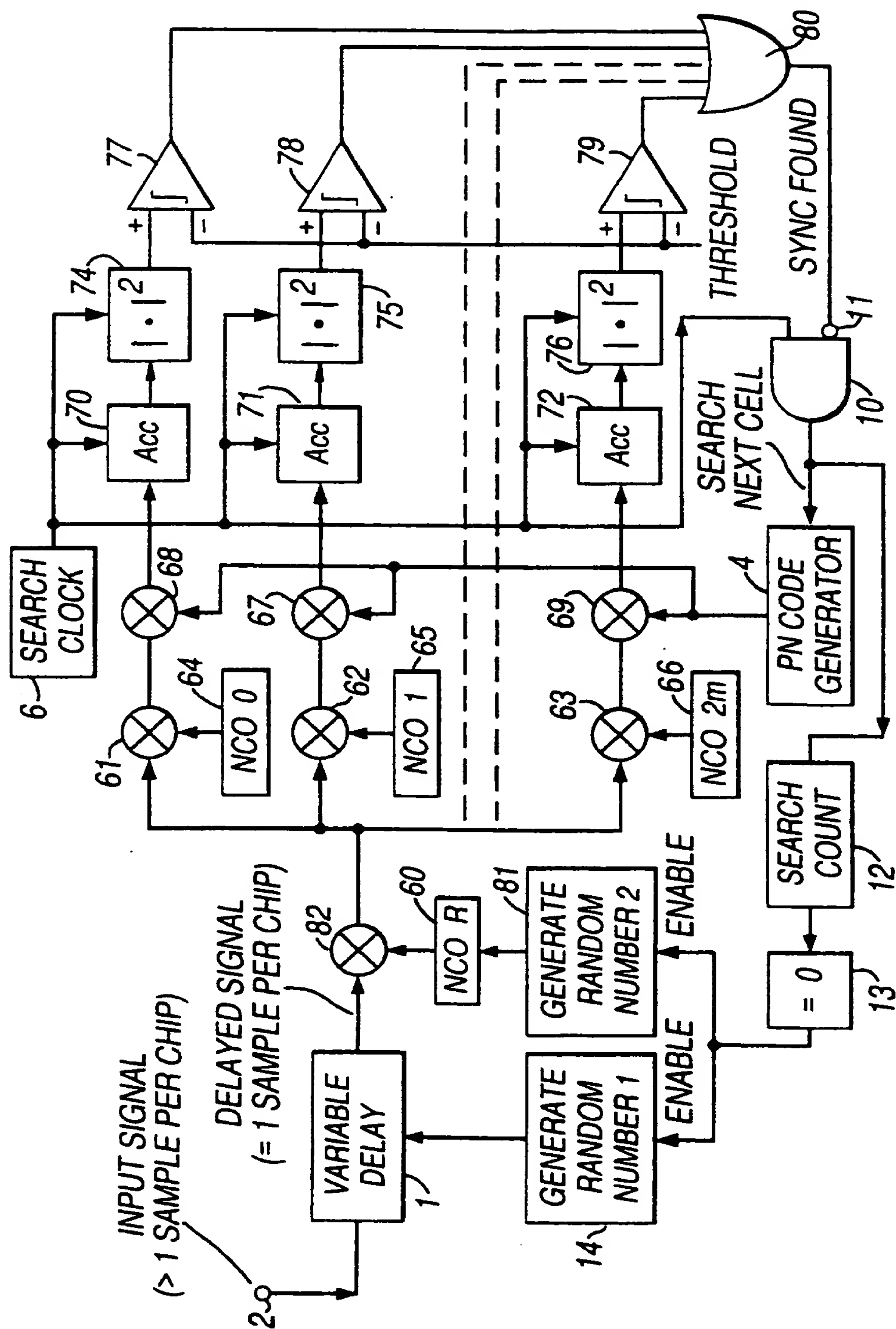


Fig. 5

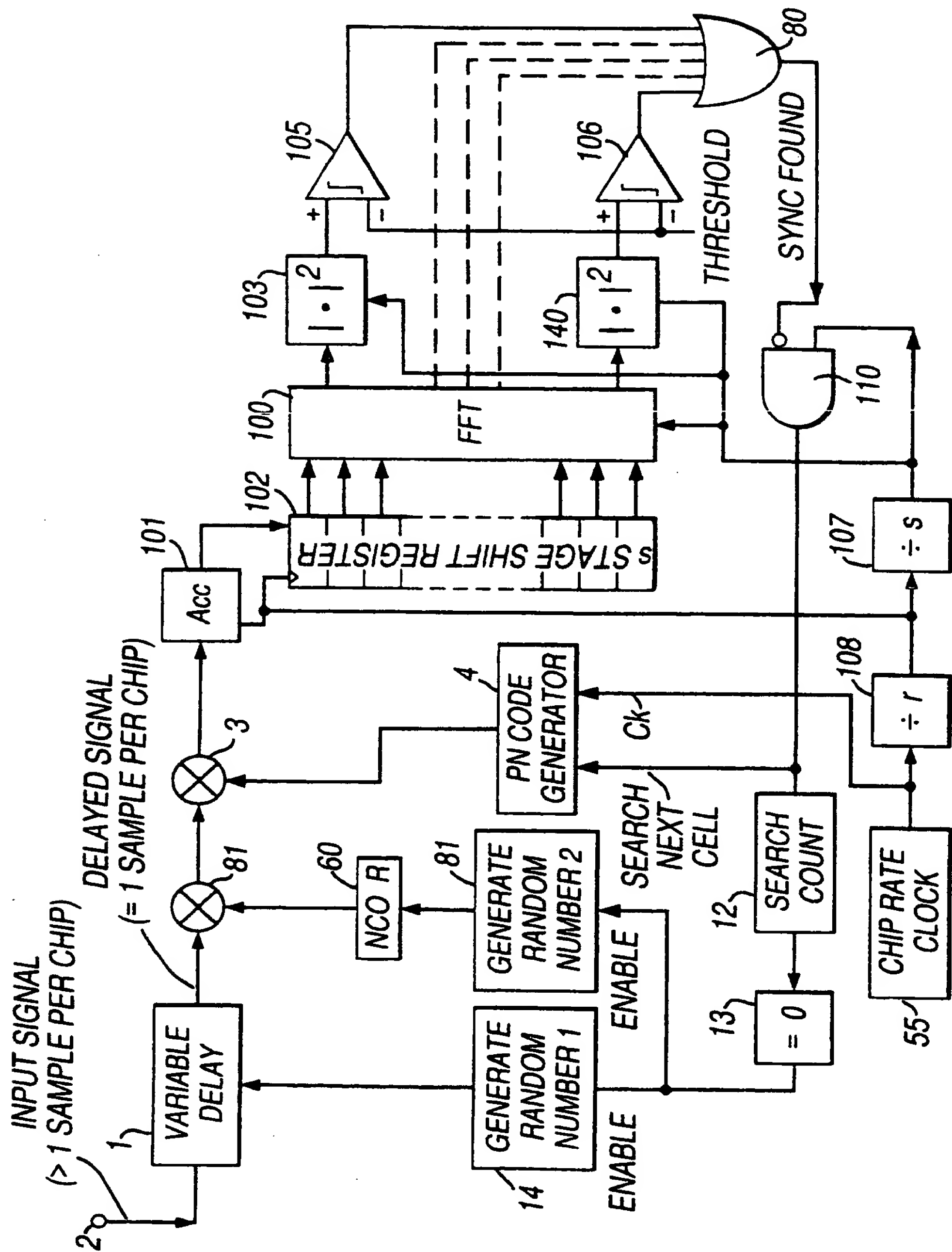


Fig. 6